

DIELEMAN et al., Ser. No. 10,644,924

AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for producing articles or substrates with at least one surface on which a liquid A has low adhesion at a temperature $T \geq T_1$, by applying a substance B in liquid or in dissolved form to a surface S of the substrate or article in an amount which covers the surface, which comprises using a surface S which has many depressions and/or elevations, where the average distance between adjacent elevations is in the range from 0.01 to 500 μm and the average height difference between mutually adjacent elevations and depressions is in the range from 0.01 to 500 μm , wherein the substance B is immiscible with the liquid A or soluble therein to an extent of less than 0.1 g/l (at 20°C and 1013 mbar), and the substance B has been selected from low-molecular-weight and oligomeric substances B1 which are liquid at the temperature T_1 , and wherein the substance B has a kinematic viscosity $\leq 10000 \text{ mm}^2/\text{sec}$ (at 20°C) and the vapor pressure of the substance B at 20°C does not exceed 0.1 mbar.
2. (previously presented) The process claimed in claim 1, wherein the substance B has a static contact angle $\theta_B < 10^\circ$ (at 20°C and 1013 mbar) on the surface.
3. (previously presented) The process claimed in claim 1, wherein the selection of the substance B is such that it complies with the relationship of formula I:

$$\gamma_B \cdot \cos(\theta_B) - \gamma_A \cdot \cos(\theta_A) - \gamma_{A/B} > 0 \quad (I)$$

where

γ_A is the surface tension of the liquid A

θ_A is the static contact angle of the liquid A on the untreated surface S

γ_B is the surface tension of the substance B

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θ_B is the static contact angle of the liquid substance B on the untreated surface S, and

$\gamma_{A/B}$ is the surface tension at the boundary between liquid A and substance B.

4. (canceled)
5. (previously presented) The process claimed in claim 1, wherein the amount of the substance B applied to the surface is from 10^{-3} g/m² to 100 g/m².
6. (previously presented) The process claimed in claim 1, wherein the temperature T1 is at least -10°C.
7. (previously presented) The process claimed in claim 1, wherein the liquid A has been selected from aqueous liquids.
8. (previously presented) The process claimed in claim 1, wherein the surface tension of the substance B at its boundary is ≤ 50 mN/m at 20°C.
9. (previously presented) The process claimed in claim 1, wherein the substance B has been selected from hydrocarbons having at least 8 carbon atoms, perfluorohydrocarbons having at least 8 carbon atoms, alkanols having at least 8 carbon atoms and silicones.
10. (previously presented) An article which has at least one surface which is obtained by a process as claimed in claim 1.
11. (previously presented) The process claimed in claim 1, wherein the substance B has been selected from hydrocarbons having 8 to 20 carbon atoms, perfluorohydrocarbons having 8 to 40 carbon atoms and alkanols having at least 8 carbon atoms.
12. (previously presented) The process claimed in claim 11, wherein the amount of the substance B applied to the surface is from 10^{-3} g/m² to 100 g/m².
13. (previously presented) The process claimed in claim 11, wherein the temperature T1 is at least -10°C.

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14. (previously presented) The process claimed in claim 11, wherein the liquid A has been selected from aqueous liquids.
15. (new) The process claimed in claim 1, wherein the vapor pressure of the substance B at 20°C does not exceed 0.01 mbar.